

RAW SEQUENCE LISTING

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Application Serial Number: 10/849,551
Source: FEWO
Date Processed by STIC: 10-26-04

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IFWO

RAW SEQUENCE LISTING DATE: 10/26/2004
 PATENT APPLICATION: US/10/849,551 TIME: 16:46:09

Input Set : D:\US Utility 50229-435 Sequence Listing.txt
 Output Set: N:\CRF4\10262004\J849551.raw

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3 <110> APPLICANT: University of Kentucky Research Foundation
4      Moscow, Jeffrey A.
5      Jordan, Craig
6      Xin, Lu
8 <120> TITLE OF INVENTION: AN ORGANIC CATION TRANSPORTER PREFERENTIALLY EXPRESSED IN
9      HEMATOPOIETIC CELLS
11 <130> FILE REFERENCE: 050229-435
13 <140> CURRENT APPLICATION NUMBER: 10/849,551
14 <141> CURRENT FILING DATE: 2004-05-20
16 <150> PRIOR APPLICATION NUMBER: 60/471,709
17 <151> PRIOR FILING DATE: 2003-05-20
19 <160> NUMBER OF SEQ ID NOS: 14
21 <170> SOFTWARE: PatentIn version 3.3
23 <210> SEQ ID NO: 1
24 <211> LENGTH: 1734
25 <212> TYPE: DNA
26 <213> ORGANISM: Homo sapiens
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33 tctgtgttca tgggagtcac cctcatcat gtctgcaggc cccaggcaa tgtgagtcag      180
35 gttgttttcc ataatcactc taattggagt ttggaggaca ccggggccct gttgtcttca      240
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39 tgtagcagga ataagaggga gaacacatcg agtttgggct atgaatacac tggcagtaag      360
41 aaagagtttc cttgtgtgga tggctacata tatgaccaga acacatggaa aagcactgcg      420
43 gtgaccaggt ggaacctggt ctgtgaccga aaatggcttg caatgctgat ccagccccta      480
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49 tttgcagttg attattacac cttcatggct gctcgtttt ttcttgccat ggttgcaagt      660
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59 tatgaagaag cacaaaaaat agttgacatc atggccaagt ggaacagggc aagctcctgt      960
61 aaactgtcag aacttttatc actggacctc caaggctctg ttagtaatat cccactgaa      1020
63 gttcagaagc acaacctatc atatctgttt tataactgga gcattacgaa aaggacactt      1080
65 accgtttggc taatctggtt cactggaagt ttgggattct actcgttttc cttgaattct      1140
67 gttacttagt gaggcaatga atacttaaac ctcttctctc tgggtgtagt ggaaattccc      1200
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71 tctcttttct gcagtgcact ggctgtggtt gtcgttatgg tgatcccca gaaacattat      1320
73 attttgggtg tgggtgacagc tatggttgga aaatttgcca tcggggcagc atttggcctc      1380
75 atttatcttt atacagctga gctgtatcca accattgtaa gatcgctggc tgtgggaagc      1440
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81 acactaaagc ttccagaaac ccttgggaaa cggctagcaa ctacttggga ggaggctgca 1620
83 aaactggagt cagagaatga aagcaagtca agcaaattac ttctcacaac taataatagt 1680
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89 <211> LENGTH: 578
90 <212> TYPE: PRT
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97 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
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101 <222> LOCATION: (268)..(269)
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111 <222> LOCATION: (410)..(410)
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120 Gly Arg Phe Gln Arg Val Leu Tyr Phe Ile Cys Ala Phe Gln Asn Ile
121 20 25 30
124 Ser Cys Gly Ile His Tyr Leu Ala Ser Val Phe Met Gly Val Thr Pro
125 35 40 45
128 His His Val Cys Arg Pro Pro Gly Asn Val Ser Gln Val Val Phe His
129 50 55 60
132 Asn His Ser Asn Trp Ser Leu Glu Asp Thr Gly Ala Leu Leu Ser Ser
133 65 70 75 80
136 Gly Gln Lys Asp Tyr Val Thr Val Gln Leu Gln Asn Gly Glu Ile Trp
137 85 90 95
140 Glu Leu Ser Arg Cys Ser Arg Asn Lys Arg Glu Asn Thr Ser Ser Leu
141 100 105 110
144 Gly Tyr Glu Tyr Thr Gly Ser Lys Lys Glu Phe Pro Cys Val Asp Gly
145 115 120 125
148 Tyr Ile Tyr Asp Gln Asn Thr Trp Lys Ser Thr Ala Val Thr Gln Trp
149 130 135 140
152 Asn Leu Val Cys Asp Arg Lys Trp Leu Ala Met Leu Ile Gln Pro Leu
153 145 150 155 160
156 Phe Met Phe Gly Val Leu Leu Gly Ser Val Thr Phe Gly Tyr Phe Ser
157 165 170 175
160 Asp Arg Leu Gly Arg Arg Val Val Leu Trp Ala Thr Ser Ser Ser Met
161 180 185 190

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169      210      215      220
172 Val Gly Phe Val Tyr Val Met Glu Phe Ile Gly Met Lys Ser Arg Thr
173 225      230      235      240
176 Trp Ala Ser Val His Leu His Ser Phe Phe Ala Val Gly Thr Leu Leu
177      245      250      255
W--> 180 Val Ala Leu Thr Gly Tyr Leu Xaa Arg Thr Trp Xaa Xaa Tyr Gln Met
181      260      265      270
W--> 184 Ile Xaa Xaa Ser Thr Val Thr Val Pro Phe Ile Leu Cys Cys Trp Val
185      275      280      285
188 Leu Pro Glu Thr Pro Phe Trp Leu Leu Ser Glu Gly Arg Tyr Glu Glu
189      290      295      300
192 Ala Gln Lys Ile Val Asp Ile Met Ala Lys Trp Asn Arg Ala Ser Ser
193 305      310      315      320
196 Cys Lys Leu Ser Glu Leu Leu Ser Leu Asp Leu Gln Gly Pro Val Ser
197      325      330      335
200 Asn Ser Pro Thr Glu Val Gln Lys His Asn Leu Ser Tyr Leu Phe Tyr
201      340      345      350
204 Asn Trp Ser Ile Thr Lys Arg Thr Leu Thr Val Trp Leu Ile Trp Phe
205      355      360      365
208 Thr Gly Ser Leu Gly Phe Tyr Ser Phe Ser Leu Asn Ser Val Asn Leu
209      370      375      380
212 Gly Gly Asn Glu Tyr Leu Asn Leu Phe Leu Leu Gly Val Val Glu Ile
213 385      390      395      400
W--> 216 Pro Ala Tyr Thr Phe Val Cys Ile Ala Xaa Asp Lys Val Gly Arg Arg
217      405      410      415
220 Thr Val Leu Ala Tyr Ser Leu Phe Cys Ser Ala Leu Ala Cys Gly Val
221      420      425      430
224 Val Met Val Ile Pro Gln Lys His Tyr Ile Leu Gly Val Val Thr Ala
225      435      440      445
228 Met Val Gly Lys Phe Ala Ile Gly Ala Ala Phe Gly Leu Ile Tyr Leu
229      450      455      460
232 Tyr Thr Ala Glu Leu Tyr Pro Thr Ile Val Arg Ser Leu Ala Val Gly
233 465      470      475      480
236 Ser Gly Ser Met Val Cys Arg Leu Ala Ser Ile Leu Ala Pro Phe Ser
237      485      490      495
240 Val Asp Leu Ser Ser Ile Trp Ile Phe Ile Pro Gln Leu Phe Val Gly
241      500      505      510
244 Thr Met Ala Leu Leu Ser Gly Val Leu Thr Leu Lys Leu Pro Glu Thr
245      515      520      525
248 Leu Gly Lys Arg Leu Ala Thr Trp Glu Glu Ala Ala Lys Leu Glu
249      530      535      540
252 Ser Glu Asn Glu Ser Lys Ser Ser Lys Leu Leu Thr Thr Asn Asn
253 545      550      555      560
256 Ser Gly Leu Glu Lys Thr Glu Ala Ile Thr Pro Arg Asp Ser Gly Leu
257      565      570      575
260 Gly Glu

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264 <210> SEQ ID NO: 3
265 <211> LENGTH: 123805
266 <212> TYPE: DNA
267 <213> ORGANISM: Homo sapiens
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274 gctcatcagc tatcgttagt gttagtgtat tttatatgtg gtgcaagaca attcgtcttc      180
276 ttccaatgtg gcccagggaa gccaaaagat tggacacccc gtgagatctt ctaggcgact      240
278 ggccccccagt gaaattgtga tcacggagga tagtagagtc ccggtagtag acataggaga      300
280 tgttccacaa actccatatg atcagcaccg ttttcgggag gcccacact gtgccgaaca      360
282 tcatgaatca gtgaggggtt aggaagcaca tcaacctccc agtgtttggg agctgctgtt      420
284 ttaagaaggt cccgtttacc attctactgc ccacatgaag agtgaagact aatccgtgga      480
286 caggatgcct ctccagtcga gctgtgcccc gtcctctctt tctcatctaa atcgaacctt      540
288 ttctctgtgg attgagatga aaagtccttg aacgcaccac cttgtgctgc taggtcagtc      600
290 tagacaatat taagtcacat ccattaagtt ttcttaaag aaaatgtttg aaatatattct      660
292 tccttcagtt cgatactaag tgtattttgc cacaagacac ttctgatga cccaatttca      720
294 ggteccccatt cttttatcta tgtgagaatt ctccactttc agactctgct taatttaact      780
296 ctctctgaaa atgtgcaagt tcataaaaaga aggtgaaata attactacgg tacatacaaa      840
298 gaggtgaaca tttctttttt atgtacaaat tgtgtgttac cccaagtgga ctttctctggg      900
300 cccgctctct ccttctgtcc caggatcctg gccagctct gtcccccaat gaactgcaga      960
302 ggtagagggg taaagaagag cagttgagtg gctcagattg ctgcctgaac tctggaccga      1020
304 ggagcaatca cgagtaaccc caaaaactgc ccattggttt gcgcactcat agcatgaaaa      1080
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308 gattcatgtg ctctgcaat gaaaggccct attgtcaaca aggetggtea acaaggcaaa      1200
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322 aaaacacatg gaaaagctga tateagttc cattgggttt ggagtggttc ttgcgggcaa      1620
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326 acttaagccc agtatctttc agagatgagt gtctaggtgc atcaccaga tcttagcctg      1740
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362	cctgtggcca	ccaaccacag	ttgaaaacct	tctaattcat	cgggcactga	gtagaacact	2820
364	ctgagtattg	tctcagtaat	gcagcccaat	tcagcttact	ctaaagtctc	ctgtgggtccc	2880
366	tcctgacaag	gcttaaaagc	aagtcttggc	tggcacgggtg	gtgcgtgcct	gcagtcccag	2940
368	ctatccagga	gggtgagggc	tgaggcagca	tgacgactgt	tcaagccagg	agttcaagac	3000
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374	gatcatctga	ggtcgggagt	ttgagacaag	cctgaccaac	atggagaaac	cctgtctcta	3180
376	ctaaaaacac	aaaattagtc	gggcgtgggtg	gcacaggcca	gtaatcccag	ctactcgcga	3240
378	ggctgcggca	ggagaatcgc	ttgaacctag	gaggcagagg	ttgcagtga	tggagatcgc	3300
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454	acaaaaaacc	tgtcttcccc	caacaggcac	aattacattt	gtaaagatgg	ttcccagcag	5580

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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:2; Xaa Pos. 264, 268, 269, 274, 275, 410

VERIFICATION SUMMARY

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L:180 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:256
L:184 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:272
L:216 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:400